

We Claim

1. A cooled turbine structure comprising hollow shroud segments, and pipe members adjacent stages of guide vanes and turbine blades, wherein said turbine blades are
5 surrounded in spaced relationship by said hollow shroud segment, that are connected via respective upstream ends to said guide vanes, leaked air from a central space volume in a gas turbine engine when operatively associated therewith, the passage of said leaked air from said central space
10 volume to said hollow shroud segment interiors being enabled by said pipe members which extend through said guide vanes which connect said space volume and said hollow shroud segment interiors in flow series and wherein said shroud segments include a leaked air exit aperture in their
15 respective downstream edges.
2. A cooled turbine structure as claimed in claim 1 wherein each hollow shroud segment interior includes a dividing wall so as to provide radially inner and outer compartments with respect to the axis of rotation of a gas
20 turbine engine when associated therewith.
3. A cooled turbine structure as claimed in claim 2 wherein said dividing wall has multiple perforations therein so as to enable leaked air to flow from one compartment to the other compartment.
- 25 4. A cooled turbine structure as claimed in claim 3 wherein the direction of flow from one compartment to the other compartment is radially inward with respect to the axis of rotation of a gas turbine engine when associated therewith.
- 30 5. A cooled turbine structure as claimed in claim 4 wherein said leaked air exit apertures connect said radially compartment with the gas annulus of a gas turbine engine when associated therewith.

6. A cooled turbine structure as claimed in claim 2 wherein each said dividing wall is spaced from its associated inner wall by pillars.

7. A cooled turbine structure as claimed in claim 1
5 wherein the leaked air inlet end of each shroud segment is shaped so as to engage said pipe members by point contact only.

8. A cooled turbine structure as claimed in claim 7
10 wherein the shroud segments are pivotal such that on extension of their respective guide vanes if exposed to excessive heat, said extension pivots said shroud segments away from the tips of their adjacent turbine blades.

9. A gas turbine engine including a cooled turbine structure as claimed in claim 1.